

REQUEST FOR RECONSIDERATION

Claims 1-17 remain active in this application.

The claimed invention is directed to a coffee composition, a soluble coffee composition, a packaged beverage filled with a coffee composition and methods for preparing same, comprising 0.01 to 1 wt.% of chlorogenic acids and less than 0.1 wt.% of hydroxyhydroquinone (HHQ), based on the amount of chlorogenic acids.

Coffee compositions are consumed around the world. In spite of a large content of chlorogenic acid, a known antihypertensive agent, coffee has been recognized to increase blood pressure levels. Applicants have discovered that reduction of HHQ content, a component of coffee, in a chlorogenic acid containing coffee composition, can provide an antihypertensive effect for coffee beverages. Such a coffee composition is nowhere disclosed or suggested in the cited art of record.

The rejections of claim 1-2 under 35 U.S.C. 103(a) over Slaga et al. in view of Stelkens GB 354,942 and Sosuke et al. JP 6-315,434 and of claims 3-15 in further view of various citations to Suzuki et al EP 1186294, Kiefer U.S. 5,588,742, Schlichter U.S. 3,615,666 and Behrman U.S. 2,430,663 are respectfully traversed.

None of the cited references disclose or suggest a composition comprising 0.01 to 1 wt. % of chlorogenic acids and less than 0.1 wt. % of HHQ, based on the amount of chlorogenic acids.

Slaga et al. has been cited for a disclosure of a coffee composition containing 0.6 wt. % of chlorogenic acid (page 2, example 1) but lacking a disclosure of an HHQ content of less than 0.1 wt.% based on the amount of chlorogenic acids (page 3, paragraph 6 of official action).

Stelkens has been cited for a disclosure of treatment of infusions of tea and coffee with activated carbon such that caffeine and other distasteful constituents are adsorbed (page

1, lines 74-84). Treatment with activated carbon results in a decrease in the **total nitrogenous content** (43% reduction) of the coffee infusion (page 2, lines 16-20). There is no express disclosure of removal of HHQ. HHQ is not a nitrogenous compound. Applicants have previously provided evidence that the use of zinc chloride treated activated carbon of an average particles size of 0.2-0.4 mm does not inherently provide an HHQ content as claimed.

JP '434 has been cited for a disclosure of filtering coffee through adsorbents such as activated carbon. The reference report the use of adsorbent for "polymeric brownish black ingredients" to control astringency (see abstract). There is no disclosure to remove HHQ in the reference, but rather that polymeric brownish black ingredients are removed. The official action reasons that there would be motivation to filter coffee with the adsorbent of JP '434 until a desired level/removal of poisonous substance is obtained.

Contrary, to the interpretation in the official action, JP '434 is directed to a method in which a general **household coffee maker** is provided with a filter portion disposed under a coffee extracting portions, **to control astringency**. Such is not a process for removing discretionary levels of poisonous substances, but rather is merely a process in which an adsorbent is provided to filter the coffee prior to drinking.

Applicants respectfully submit that mere drip filtration of a coffee composition through activated carbon as described in JP '434 would not inherently produce an HHQ level of less than 0.1 wt.%, based on the amount of chlorogenic acids.

As evidence that removal of HHQ to within the claimed range is not inherent, applicants enclose herewith the second declaration of Mr. Hideo Ohminami¹, a named inventor of the above-identified application. Using an apparatus analogous to that of JP '434 Mr. Ohminami prepared coffee compositions by a drip extraction process, the extract passing through activated carbon. Since the reference does not disclose sufficient experimental

¹ Applicants note that Mr. Ohminami name may also be spelled Oominami, as it appears on his 1.53 declaration.

details, reasonable adsorbent amounts and extraction times were used. For the examiner's convenience a portion of the data is reproduced below:

	A	B	C
Coffee beans		Moca (medium roasted coffee) 40 g	
Volume of water and temperature		550 mL, 95°C	
Extraction time		3 min	
Activated carbon Shirasagi WH2c 42/60	0 g	5 g	10 g
Content of HHQ	0.001063%	0.000948%	0.000844%
Content of chlorogenic acid	0.12480%	0.12500%	0.12550%
Ratio of HHQ/chlorogenic acid	0.85%	0.76%	0.67%
Amount of extracted coffee	470.0 mL	460.0 mL	455.0 mL

As is apparent, under extraction conditions similar to that of a household coffee maker (3 min) merely passing coffee extract through an activated carbon adsorbent was insufficient to produce a coffee composition having <0.1 wt. % of HHQ based on chlorogenic acid (claims 1-6 and 11-16) or no substantial HPLC peak where HHQ would be detected (claims 7-10 and 17). The ratios of HQQ/chlorogenic acid of 0.67% to 0.85% all exceed the claim limitation of <0.1 wt. % HHQ based on chlorogenic acid.

Furthermore, there would be no motivation to extend the treatment conditions with the adsorbent since the adsorbent is merely used to reduce astringency caused by polymeric brownish black ingredients in a general household coffee maker. There is no suggestion to use such an adsorbent to remove all "poisonous substances." Since an HHQ content as claimed is not inherent to the extraction procedure of JP '434, the claimed invention is not rendered obvious over this reference and accordingly withdrawal of the rejections under 35 U.S.C. §103 (a) is respectfully requested.

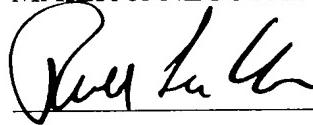
The basic deficiencies of the primary references are not cured by the secondary references as none of the secondary references disclose or suggest a process which would result in an HHQ content, as claimed.

Since the cited references fail to suggest removal of HHQ to a content as claimed, the claimed invention would not have been obvious and accordingly, withdrawal of the rejections under 35 U.S.C. §103 (a) is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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